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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Andreas Stockhaus

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EXAMINER

GILMAN, ALEXANDER

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/773,964	STOCKHAUS ET AL.	
	Examiner	Art Unit	
	Alexander D Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☐ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/02/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/04/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yohn et al.

With regard to claims 1, 8, Yohn et al (US 5,482,474) disclose an arrangement comprising:
an electronic component (col. 5, lines 13-16), with terminal contacts
a printed circuit board (22) with electrical contacts (11) , and an at least partly flexible conductor support
(4) with a plurality of interconnects (8, 10) , the conductor support providing an electrical connection
between the terminal contacts of the electronic component and the electrical contacts of the printed circuit
board, wherein a portion (10) of the conductor support that is connected to the printed circuit board is
arranged on an end face of the printed circuit board and
extends perpendicularly in relation to the surface of the
printed circuit board.

With regard to claim 2, Yohn et al disclose that the conductor support includes a first portion with first
contact regions (8) for the connection to associated electrical contacts of the printed circuit board and a
second portion (10) with second contact regions for the electrical connection to the terminal
contacts of the electronic component, and the first contact regions being in connection with electrical
contacts of the printed circuit board, which on the surface of the printed circuit board are led up to the end
face and are adjacent to the latter.

With regard to claim 4, Yohn et al disclose that the printed circuit board having adjusting structures (18)
and the conductor support having adjusting structures (17) corresponding to them in the portion that is
connected to the printed circuit board.

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Claims 1, 4- 8, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Perino et al.

With regard to claims 1, 8, Perino et al (US 6,234,820) disclose (Fig. 1 ,4) an arrangement comprising: an electronic component 110),with terminal contacts (130) a printed circuit board (150) with electrical contacts (11) , and an at least partly flexible conductor support (440) with a plurality of interconnects (480, 460) , the conductor support providing an electrical connection between the terminal contacts of the electronic component and the electrical contacts of the printed circuit board, wherein a portion (part of 450) of the conductor support that is connected to the printed circuit board is arranged on an end face of the printed circuit board and extends perpendicularly in relation to the surface of the printed circuit board.

With regard to claims 4-6, Perino et al disclose that the printed circuit board having at least one projection (445) on the end face and one clearance (the curvilinear portion to meet a configuration of 445) corresponding to a projection of the printed circuit board.

With regard to claim 7, Perino et al disclose that the conductor support is bent approximately 180 degrees between the first portion and the second portion.

With regard to claim 18, Perino et al disclose (Fig. 4) arrangement comprising: an electronic component(110) including a terminal contact; a printed circuit board (150) having parallel upper and lower surfaces, and a peripheral edge extending between the upper and lower surfaces, the printed circuit board also including an electrical contact formed on one of the upper and lower surfaces; and an at least partially flexible conductor support (450, 460) including an elongated conductor having a first contact region (450, 460 between 420 and an edge of the upper surface of the PCB) connected to the electrical contact formed on the printed circuit board, and a second contact region (470, 480) connected to the terminal contact of the electronic component, wherein a first portion of the conductor support including the first contact region abuts the peripheral edge of the printed circuit board and extends perpendicular to the upper and lower surfaces.

With regard to claims 19, 20, Perino et al disclose a second portion including second contact region connected to the electronic component; and a third portion (between the end of the top surface of PCB

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and end of 470, 480) bent approximately 180 degrees and extending between the first and second portions, wherein the first and second portions define parallel planes.

Claims 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibaraki et al

With regard to claim 10, Ibaraki et al (US 5,681,176) disclose (Fig. 7, Fig. 11, 15, 16) a conductor support comprising:

a plurality of interconnects formed on an at least partly flexible, planar dielectric;

a first portion defining a first width (7a, 107, 108), the first portion having first contact regions for the connection of

the interconnects to associated electrical contacts of a printed circuit board (in box 2),

a second portion (7b, 107, 108) defining a second width (it is not claimed that the second width is different from the first width), the second portion having second contact regions (7b) for the electrical connection of the interconnects to the terminal contacts of

an electronic component, and

a third portion (diagonal portion in Fig. 7)), which extends between the first and second portions and has a third width which is narrower than the first width of the first portion and the second width of the second portion.

With regard to claim 11, Ibaraki et al disclose (Fig. 9) that the third portion being bent by 180 degrees.

With regard to claims 12, 13, 14 Ibaraki et al disclose (Fig. 21a) the first portion having mechanical adjusting structures for the coupling of the first portion to a printed circuit board (W, 108)).

With regard to claim 15, Ibaraki et al disclose (Fig. 22a-22c) that the first portion of the conductor support having two rows of contact regions (Fig. 22c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yohn et al .

With regard to claim 9, Yohn disclose the electrical component , however no not specifically teach an optoelectronic component comprising at least one of a light-generating element and a light. Since the electronic component in Yohn et al (col. 5, lines 13-16) can incorporate also an optoelectronic component comprising a light-generating element (for example PCB with LED), the limitation deems to be met

Claims 10-13, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Ibaraki et al

With regard to claim 10, the admitted prior art disclose (Fig. 8, 9) a conductor support (200) comprising: a plurality of interconnects formed on an at least partly flexible, planar dielectric; a first portion (202) defining a first width the first portion having first contact regions for the connection of the interconnects to associated electrical contacts of a printed circuit board (300), a second portion (201) defining a second width (it is not claimed that the second width is different from the first width) , the second portion having second contact regions (112) for the electrical connection of the interconnects to the terminal contacts of an electronic component, and a third portion (203a), which extends between the first and second portions.

The admitted prior art does not disclose that third width of the support being narrower than the first width of the first portion and the second width of the second portion.

Ibaraki et al disclose (Fig.7, 15) that third width (an intermediate portion) of the support being narrower than the first width of the first portion and the second width of the second portion (the width of portions at the ends).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the width of the third portion narrower than the widths of the first and the second portions as taught by Ibaraki et al, to increase a flexibility of the support when it being folded.

With regard to claim 11, the admitted prior art when modified by Ibaraki et al disclose (the admitted prior art -Fig.8, 9) that the third portion being bent by 180 degrees.

With regard to claims 12, 13 the admitted prior art when modified by Ibaraki et al disclose (the admitted prior art -Fig.8, 9) that the first portion having mechanical adjusting structures for the coupling of the first portion to a printed circuit board

With regard to claims 16, 17, the admitted prior art when modified by Ibaraki et al disclose (the admitted prior art -Fig.8, 9) that the first portion of the conductor support being formed such that is substantially rectangular. and the second portion of the conductor support being formed such that it is substantially circular.

Allowable Subject Matter

Claims 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. No prior art has been found to anticipate or render obvious the presently claimed subject matter. Specifically, none of the prior art of record discloses the combination of the limitations presented including the first portion of the conductor support having two rows of first contact regions, the contact regions of the first row being connected to electrical contacts on the one surface of the printed circuit board and the contact regions of the second row being connected to electrical contacts on the other surface of the printed circuit board (claim 3) .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/07/2005

Handwritten signature of Alex Gilman in black ink.

ALEXANDER GILMAN
PRIMARY EXAMINER